

UFO's Not From Mars

➤ IF "FLYING SAUCERS" actually contain intelligent invaders from space, as some have suggested, the chances are high that they do not come from Mars or Venus.

If unidentified flying objects actually came from either of the two planets closest to earth, then UFO sightings should be much more frequent at certain favorable times than during other periods.

Records of reported sightings do not show this expected increase, according to Dr. Charles H. Smiley, director of Brown University's Ladd Observatory, Providence, R.I., who investigated the frequency of UFO sightings from Sept. 8, 1956, through Dec. 31, 1963.

The most likely time of arrival, Dr. Smiley has calculated, would be during the 20-day period centered around the launch date allowing travel between planets on an orbit requiring the least amount of energy. This is the so-called "launch window" used to hurl space vehicles from earth to the moon, or to Venus or Mars.

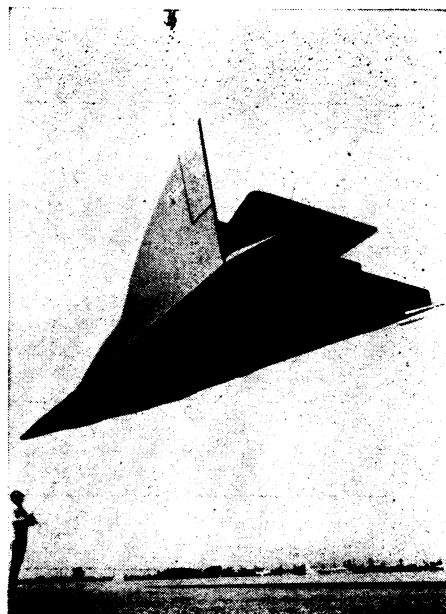
The same principles that make certain dates the most favorable for launch-

ing interplanetary probes from earth also govern the times when space probes from other planets could be sent earthward. These arrival times came at intervals of about 584 days for Venus and about 780 days for Mars.

During the seven-year period between 1956 and 1963, there were five favorable 20-day intervals for landings from Venus and four for landings from Mars. However, the number of unidentified flying objects—10—sighted during the nine periods was actually less than the average number of UFO's during 20-day intervals not included in the favorable arrival times—242 in 2,570 days.

Dr. Smiley also investigated to see if any of the reported UFO's were traveling in the direction they should have had if coming from Mars or Venus on a minimum-energy orbit. Roughly speaking, a space vehicle from Mars should overtake Earth from behind, while one from Venus should be overtaken by the Earth.

He did not find "a single case of the UFO coming from the proper direction to indicate that it had originated on Mars or Venus."



LOCKHEED

COMING BACK—Highly maneuverable reentry vehicles that will land like airliners on return from space flight are anticipated by engineers at Lockheed-California Company, Burbank. This full-scale wooden model of an "aerodynamic maneuvering reentry" vehicle is a preliminary design related to a series under study for the U.S. Air Force.

METALLURGY

New Alloys Promising

➤ A PROCESS for creating new metallic alloys holding great promise in such fields as electronics and computers is now under development.

Informally, the method is called "splat cooling." It consists of blasting a molten droplet of a pure metal or an alloy against the rim of a refrigerated metal wheel spinning at a high speed.

The droplet is then cooled in the form of a small piece of thin foil at an extremely high rate—so fast that the atoms do not have time to realign themselves in their usual patterns.

Because of the very high cooling rate, crystalline alloys not otherwise obtainable can be synthesized. Although production of these "abnormal" alloys is now limited to small bits of thin foil, the prospect of creating structures that have never existed before is highly intriguing to metallurgists.

Future application of the unusual thin foils is still speculative, but sug-

gestions have included discovery of new electrical and magnetic properties, as well as the synthesis of new superconducting compounds that would be valuable as components in computers.

One of the alloys consists of a simple cubic structure, with one atom per unit cell, of gold-tellurium or silver-tellurium. The tellurium-based alloys have a very high resistance to electricity. They are virtually insulators, although formed from a metal and a semi-metal.

The process for producing the new alloys was developed partly under the sponsorship of the U.S. Navy's Office of Naval Research, Washington, D.C.

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